

Claims

1.-9. (Cancelled)

10. (currently amended) A method for repairing, in situ, a hollow support structure that has a deteriorated portion and an access opening, comprising the steps of

- a. placing a high tensile strength ~~material sleeve~~ in the hollow support structure, to at least a depth such that the high tensile strength ~~material sleeve~~ extends over the depth of the deteriorated portion,
- b. pouring an aggregate material into the hollow support structure, to ~~incorporate substantially fill~~ the high strength ~~material sleeve~~ ~~into with~~ the aggregate that fills the hollow support structure at least over the depth of the deteriorated portion, and
- c. allowing the aggregate to cure, in situ.

11. (original) A method as set forth in claim 10, wherein the hollow support structure has an in ground portion and an above ground portion, and wherein the hollow support structure has a deteriorated portion extending at least partially into the in ground portion, and an access opening in the above ground portion.

12. (currently amended) A method as set forth in claim 11, wherein

- a. the step of placing a high tensile strength ~~material sleeve~~ in the hollow support structure comprises providing a fabric sleeve having a mouth, placing the fabric sleeve through the access opening, forcing the sleeve into the in ground portion to at least an in ground depth that extends over the depth of the deteriorated portion, and locating the mouth of the sleeve in the access opening, and
- b. the step of pouring the ~~epoxy resin~~ aggregate material into the hollow support comprises pouring ~~the~~ an epoxy resin aggregate through the mouth of the sleeve, in an amount and to a depth such that the epoxy resin aggregate saturates the fabric sleeve and fills the hollow support structure at ~~lest~~ least over the depth of the

deteriorated portion, and the epoxy resin aggregate extends to the mouth of the fabric sleeve located in the access opening.

13. (original) A method as set forth in claim 12, wherein the step of forcing the sleeve into the in ground portion of the hollow support structure comprises tying off the sleeve, inserting a rod into the sleeve and using the rod to push the sleeve into the hollow support structure to a predetermined depth.

14. (original) A method as set forth in claim 12, wherein the aggregate comprises an epoxy resin aggregate that is mixed from the following materials; sand, gravel, saturating epoxy and epoxy hardener.

15. (currently amended) A method as set forth in claim 14, wherein the epoxy resin aggregate is mixed in the following relative proportions: 24% saturating epoxy, 12% epoxy hardener, 33% sand and 33% gravel.

16. (currently amended) A method as set forth in claim 10, including the further step of wrapping predetermined portion(s) of the hollow support structure, to contain the ~~composite dowel material~~ high strength sleeve and the aggregate material in the hollow support structure.

17. (currently amended) A method as set forth in claim 16, wherein the step of wrapping the exterior of the hollow support structure proceeds precedes the step of pouring epoxy resin aggregate into the hollow support structure.

18. (currently amended) A method of forming, in situ, a dowel structure that reinforces a portion of a hollow support structure, comprising the steps of;

- a. determining the depth of the portion of the hollow support structure that is to be reinforced,
- b. placing a high tensile strength reinforcement ~~component~~ sleeve inside the hollow support structure such that the high tensile strength reinforcement ~~component~~ sleeve extends at least over the depth of the portion of the hollow support structure that is being reinforced, and

c. pouring into the hollow support structure an epoxy aggregate that substantially fills the high tensile strength reinforcement sleeve and hollow support structure at least over the depth of the portion of the hollow support structure that is being reinforced, and allowing the epoxy aggregate to cure in situ.

19. Cancelled.

20. Cancelled.

21. (original) A method for preparing a hollow support structure for incorporation of a composite dowel structure into the hollow support structure, comprising the steps of

- a. providing a fabric sleeve of high tensile strength fabric having a mouth,
- b. placing the fabric sleeve through an access opening in the hollow support structure,
- c. forcing the sleeve into the hollow support structure to a desired depth, and, and
- d. locating the mouth of the sleeve in the access opening, so that an epoxy resin aggregate can be poured into the hollow support structure through the mouth of the sleeve and to the desired depth.

22. (original) A method as set forth in claim 21, wherein the step of forcing the sleeve into the hollow pole comprises inserting a rod into the fabric sleeve and pushing the rod into the hollow pole, to push the sleeve into the in ground portion to the desired depth.

23. (currently amended) A method as set forth in claim [[22]] 21, including forming the sleeve of a carbon sleeve part disposed inside a fiberglass sleeve part.

24. (new) A method as set forth in claim 10, wherein the sleeve comprises a carbon sleeve part disposed inside a fiberglass sleeve part.

25. (new) A method as set forth in claim 18, wherein the sleeve comprises a carbon sleeve part disposed inside a fiberglass sleeve part.